

Incorporating the Benefits of Climate Protection Into Federal Rulemaking

Workshop on Assessing the Benefits of Avoided Climate Change

Martha Roberts

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ENVIRONMENTAL DEFENSE

finding the ways that work

Overview

- Benefit cost analysis in federal rulemaking
- How the social cost of carbon has been incorporated
- Suggestions for future incorporation

Benefit Cost Analysis in Federal Rulemaking

- Executive orders call for agencies to prepare economic analyses
 - For all significant regulatory actions, where permitted by law
- Includes benefit cost analysis
 - Numerous imperatives to consider all benefits and costs
- Results of benefit cost analyses can be a major determinant of the final regulations

The Social Cost of Carbon in Federal Rulemakings

- For many regulations, avoided GHG emissions are a central benefit
 - Emissions standards, efficiency standards
- Yet until recently, no regulations included any value for the social cost of carbon
- Without accounting for the social cost of carbon, agencies may miss cost effective opportunities to reduce GHG emissions

NHTSA Fuel Efficiency Standards

- 2006 light-duty truck fuel efficiency standards
 - Relied on benefit cost analysis to determine the optimal standard
 - But omitted any value for reducing GHG emissions
 - “The values that NHTSA assigns to benefits are critical. Yet, NHTSA assigned no value to the most significant benefit of more stringent CAFE standards: reduction in carbon emissions.” Ninth Circuit Court of Appeals, *Ctr. for Biological Diversity v. NHTSA*

NHTSA Fuel Efficiency Standards

- 2008 vehicle fuel efficiency standards
 - Incorporated a positive value for the social cost of carbon
 - However, concerns with methodology, discount rate, use of a domestic value for the benefits of GHG reductions, among others
 - “Serious flaws still plague the agency’s revised rulemaking.” Institute for Policy Integrity, NYU Law

NHTSA Fuel Efficiency Standards

- 2008 vehicle fuel efficiency standards

	SCC Estimate (2011)	Optimized Standard (2015)	CO ₂ Reductions (2010-2100)
Reference Case	\$2/ton CO ₂	29.6 MPG	6,616 MMt
Sensitivity Analysis	\$80/ton CO ₂	33.3 MPG	15,716 MMt

Incorporating the Benefits of Climate Protection

EPA Analysis on Social Cost of Carbon

- Analysis in EPA's "Technical Support Document on Benefits of Reducing GHG Emissions" displays significant advantages
 - Meta-analysis of only recent studies using consistent, intergenerational discount rates of 3% or lower
 - Emphasizes importance of global estimates
 - Further incorporation of catastrophic risks and non-market impacts is still needed
 - Central tendency of estimates for 2007 emissions, in 2006 dollars: \$68/ton CO₂ (2% discount rate); \$40/ton CO₂ (3% discount rate)

Conclusions

- The social cost of carbon has key relevance for many rulemakings
- Uncertainty underscores need for rigorous, transparent accounting for the social cost of carbon with clear discussion of limitations
- Recommendations are needed on:
 - How to appropriately address choice variables and remaining areas of uncertainty
 - Alternative ways to describe mitigation benefits that cannot be monetized easily
 - Appropriate role for benefit cost analysis in the face of uncertainty